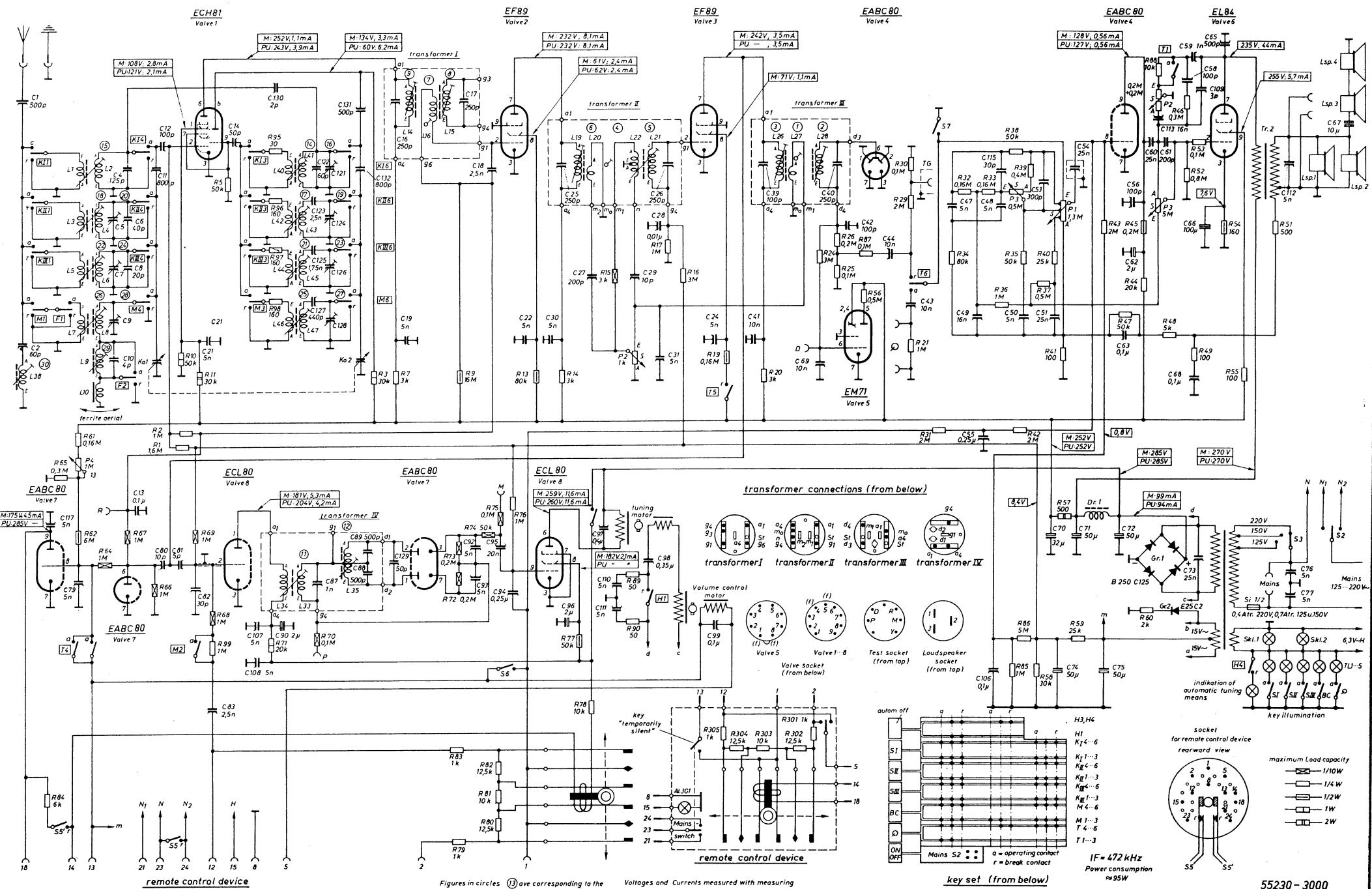


# Wiring Diagram for SABA UW465



# Aligning Instructions for SABA-UW 465 Automatic

## Tuning the AM Section

- a) Apply up to approx. 4.5 volts on to the normal voltage (negative to socket R, positive to socket Y).
- b) Connect loudspeaker and AF voltmeter to output terminals.
- c) Set treble control to minimum treble output (turned anticlockwise as far as it will go).
- d) Depress key M.
- e) Depress key „Automatic off”.
- f) To the grid of the mixer valve ECH 81 apply the generator set to 472 kc/s, 30% AM modulated, via 10,000 pF.

## 472-kc/s IF tuning, 2-circuit filter (diode filter)

1. Adjust coupling subcritically by means of 1.
2. Tune circuits I and II to maximum by means of 2 and 3.
3. If necessary, repeat processes 1. and 2.
4. Adjust coupling critically by means of 1 (maximum output voltage), and then couple subcritically by turning it anticlockwise until the output voltage falls by 20%.

## 2-circuit filter (between the two EF 89 valves)

1. Adjust coupling subcritically by means of 4.
2. Tune circuits I and II to maximum by means of 5 and 6.
3. If necessary, repeat processes 1. and 2.
4. Adjust coupling critically by means of 4 (maximum output voltage), and then couple subcritically by turning it anticlockwise until the output voltage falls by 20%.

## 2-circuit filter (after ECH 81)

1. Adjust coupling subcritically by means of 7.
2. Tune circuits I and II to maximum by means of 8 and 9.
3. If necessary, repeat processes 1. and 2.
4. Adjust coupling critically by means of 7 (maximum output voltage), and then couple supercritically by turning it clockwise until the output voltage falls by 30%.

## Aligning the 472-kc/s Control Filter

- g) Switch on the „Automatic” (Release the „Automatic off” key).
- h) Connect micro-ammeter with zero in centre between sockets M and Y.
- i) Connect D/C voltmeter ( $R=500$  KOhms, 30-volt range) to sockets P and Y.
- j) Undertake alignment between P and Y at approx. 12 volts.
  1. Turn coupling screw 10 as far as it will go in a clockwise direction, and then screw it back 2 turns.
  2. By means of 11, tune primary circuit to give maximum on voltmeter P.
  3. Adjust secondary circuit by 12 to give zero flow in rectilinear section of discriminator curve on micro-ammeter.
  4. Repeat 2. and 3. until correct.

When the control filter is properly aligned, the control motor must be motionless. If now the IF generator is thrown a few kc/s out of tune in either direction, the motor must run anticlockwise or clockwise as the case may be. In addition, when thrown out of tune by the same amount either + or -, the voltage at M must be approximately the same (Symmetry of control discriminator).

## Aligning IF Absorption Circuit 472 kc/s.

- k) Connect HF generator to antenna socket via dummy antenna (200 pF and 400 ohms in series).
- l) Depress key M. Turn ferrite antenna as far as it will go (i. e. switch it off). L-tuning of IF absorption circuit to antenna connection plate: tune 30 to give minimum on output voltmeter.

## Tuning of Oscillator and Antenna Circuit

- m) Check: With pointer stop on right, pointer must be at corresponding point on scale. The rotor of the oscillator must fit flush in the stator.

- n) Turn ferrite directional antenna as far as it will go in either direction.

1. Depress key S 1: tune generator and receiver to 15.2 Mc/s = 19.7 m. L-tuning of oscillator and antenna circuit: trim 14 and 15 to give maximum.
2. Tune generator and receiver to 22.8 Mc/s = 13.2 m. C-tuning of oscillator: tune 16 to give maximum.
3. If necessary repeat 1. and 2.
4. Depress key S 2: tune generator and receiver to 7.2 Mc/s = 41.7 m. L-tuning of oscillator and antenna circuit: trim 17 and 18 to give maximum.
5. Tune generator and receiver to 12.0 Mc/s = 25.0 m. C-tuning of oscillator and antenna circuit: tune 19 and 20 to give maximum.
6. If necessary, repeat 4. and 5.
7. Depress key S 3: tune generator and receiver to 1.9 Mc/s = 158.0 m. L-tuning of oscillator and antenna circuit: trim 21 and 22 to give maximum.
8. Tune generator and receiver to 4.8 Mc/s = 62.5 m. C-tuning of oscillator and antenna circuit: trim 23 and 24 to give maximum.
9. If necessary repeat 7. and 8.

- o) Switch on ferrite antenna.

- p) Couple generator to ferrite antenna by means of a ferrite rod or coil.
10. Depress key M: adjust generator and receiver to 570 kc/s. L-tuning of oscillator and antenna circuit: trim 25 and 26 to give maximum.
11. Tune generator and receiver to 1520 kc/s. C-tuning of oscillator and antenna circuit: trim 27 and 28 to maximum.
12. If necessary repeat 10. and 11.
- q) Turn ferrite antenna switch to outdoor aerial position.
- r) Connect HF generator to antenna socket via dummy antenna.
13. Tune generator and receiver to 570 kc/s. L-tuning of ferrite antenna substitute coil: trim 29 to give maximum.

## Adjustment of sensitivity of station finder on AM

- s) Make control effective again (remove the 4.5 volts between R and Y). Adjust the controller 13 in such a way that the movement of the station finder is switched off when there is an input signal of 100–200  $\mu$ V.

